

Looking to the future in logging equipment

Logging equipment continues to change and evolve, and the industry is going to see more of that in the future. But what trends in logging equipment will go the distance? How will the manufacturers respond to the needs of loggers with even more efficient equipment in the future?

Well, we decided to ask the heads of the three main logging equipment companies/divisions those and other questions. We received some interesting answers.

Please read on ...

Tigercat

Tony Iarocci

Tony Iarocci has been involved in the design, marketing and manufacturing of tree harvesting machines and heavy off-road vehicles for his entire working career.

Iarocci had 20 years experience in senior engineering and marketing positions with Koehring-Waterous, a leading manufacturer of tree harvesting machinery which was acquired by Timberjack, which in turn was acquired by John Deere, before he joined Tigercat.

Iarocci has been President of Tigercat Industries Inc. since its inception in 1992, with primary involvement in engineering, product development and marketing.

With the forest industry now in recovery in North America, what do you see as the major issues facing loggers? What is Tigercat doing to address these issues?

The issues we hear about most relate to rising insurance rates, rising fuel costs, and a shortage of skilled operators. Tigercat is addressing insurance costs primarily by compartmentalizing engine, hydraulic and cooling system components to reduce the risk of equipment fires and also by removing, as much as possible, the conditions that allow for debris build-up on or within a machine.

I think it would be fair to say that Tigercat leads the industry in the push for reduced fuel consumption, or more accurately, improved production per unit of fuel burned. Such innovations as ER boom technology, the energy recovery swing system, reduce fuel consumption and improve machine performance. The 234 loader, the D-series skidders and the 880 Logger are all examples of machines that lead their class in fuel efficiency and performance.

Tigercat is the only manufacturer offering high speed, high capacity shears. Widely adopted in Australia, contractors are seeing excellent fuel consumption data just by eliminating the horsepower draw of a high speed saw. Tigercat continues to promote the virtues of the shear in smaller diameter pulpwood applications.

The skilled operator shortage seems to be a world-wide phenomenon. One way Tigercat has approached the issue is to build greater comfort and ergonomics into the cabs. A couple of standout examples include the 880 Logger cab and



Turnaround-equipped skidder cabs. It gives Tigercat machine owners an edge, allowing them to attract and retain high quality operators by providing a superior work environment.

The quota issue in areas of the U.S. is tough to swallow because we know our customers could be far more efficient and productive if they were able to fully utilize the equipment.

What do you feel distinguishes Tigercat as a forestry equipment manufacturer? What does the company do to make sure it stays in touch with loggers and their needs?

Tigercat end users often say that Tigercat is different from other manufacturers because they feel they have the ear of the company. One would be hard pressed to find a company in any industry that is as approachable as Tigercat. The contact between the end user and factory is unprecedented. Tigercat is also very quick, flexible and responsive to new or changing market requirements.

Given a five year time frame, what will be the biggest areas of focus for the company, in terms of forestry equipment innovation? Where will forestry equipment be in 10 years' time?

Within the next five years, there will be a heavy push to further reduce fuel consumption and improve durability to extend the useful life of machines. This is what we hear from our customers.

It is difficult to imagine where forestry will be in 10 years. We recently shipped a cable skidder to Europe with remote control capability. Will all machines be remote controlled in ten years? Maybe the operator shortage could be alleviated if a guy could sit in a comfortable room in his house and run a buncher.

On a global basis, what harvesting methods and forestry equipment trends do you see now that could have an impact over the longer term?

The single biggest trend has been the steady advancement or encroachment of ground-based logging systems into traditional cable yarding terrain and slopes. The development of machines, especially leveling tracked machines and hydrostatic four-wheeled and six-wheeled skidders, will have a significant future impact on logging and logging costs in steep terrain the world over.

To add to this, the development and evolution of the excavator-based swing yarder has allowed for cost effective extraction on steep terrain or difficult terrain where traditional cable yarders with lengthy and complicated set-ups had been prohibitive in small plantation pulpwood clearfall operations.

Caterpillar

Kevin Thieneman

Kevin Thieneman was appointed as President of Caterpillar Forest Products at the beginning of this year. Thieneman has been with Caterpillar for 20 years and held a variety of leadership positions in product development, sales and marketing, and operations.



With the forest industry now in recovery in North America, what do you see as the major issues facing loggers? What is Cat doing to address these issues?

The major issues that we consistently hear from our logging customers are managing costs and obtaining skilled operators.

To help our customers better manage costs, we constantly look for opportunities to reduce the owning and operating costs of our equipment. One avenue is through the features and advanced technology we are building into new models. The new Tier 4 Interim engines are a great example of this. They meet the more stringent EPA standards and yet are also more fuel efficient and productive. Operating modes that give the logger the choice of running a machine for maximum fuel economy or maximum power are another example.

Another avenue is by the use of telematics—technology that uses wireless communications and GPS tracking to monitor and manage equipment. This technology is under-utilized in the logging community now, but will gain acceptance as loggers see what it can do for their bottom line. With Cat Product Link, customers can more effectively manage their business by, for example, reducing equipment idling time, identifying less productive operators and avoiding catastrophic failures. Cat dealers can monitor their customers' machines and watch for issues and alert customers when maintenance is due. The system can also ensure operations occur within agreed boundaries which will avoid potential liability and/or sanctions.

To improve the availability of skilled operators, we are partnering with organizations like the North Carolina Association of Professional Loggers to support a training program for new operators. The program teaches the skills needed to work as an entry-level forestry equipment operator. Students work on live logging sites and have an opportunity to interview with logging companies when they finish the course. Customers and others in the industry have judged it a big success, and there has been interest in duplicating the program in other areas.

We also have simulators, which operators can use to improve their skills without actually operating the equipment. This tool scores performance and identifies areas for improvement. Finally, Cat dealers offer a variety of training programs up to and including certified operator training.

What do you feel distinguishes Cat as a forestry equipment manufacturer? What does the company do to make sure it stays in touch with loggers and their needs?

What distinguishes Caterpillar as a forestry equipment manufacturer is: (1) our focus on designing machines for multiple lives, which we translate into lower costs over the total life; (2) our distribution channel, which we believe is unmatched in the industry in terms of product support delivery; and (3) our ability to tap Caterpillar Financial Services Corporation to help customers finance their equipment purchases.

Fundamentally, we understand the difficult operating conditions in which forestry equipment operates. As a result, our machines and work tools are designed and built for these rugged applications, and our dealers have the capability to keep them running and rebuild them to provide best value.

To stay in touch with loggers, we get into the woods on a regular basis to see what's happening. My goal is to meet with at least one forestry customer in his environment, on his job site, every week. Each visit provides me with an opportunity to help us at Caterpillar Forest Products find ways to better help loggers. We also stay connected with forestry associations to



provide support, including lobbying on needed changes to reduce regulatory burdens.

Given a five year time frame, what will be the biggest areas of focus for the company, in terms of forestry equipment innovation? Where will forestry equipment be in 10 years' time?

Over the next five years, our focus will be on innovations to lower owning and operating costs while increasing productivity. In both cases, telematics will be key to achieving this goal. The forest industry has just scratched the surface in terms of the potential benefits from this technology.

Over the next 10 years, we will begin seeing autonomous machines operating in forestry applications. I think this will be an extension of what happens in other industries, as well as potential shortages in experienced operators.

On a global basis, what harvesting methods and forestry equipment trends do you see now that could have an impact over the longer term?

Around the world, demand for fibre continues to grow. This will drive further consolidation among players in the industry (e.g., milliyards) and higher levels of mechanization in developing markets. At the same time, there are fewer people entering the industry. In order to support customers in operating equipment and keeping machines running, manufacturers and distributors must continue to develop ways to increase ease of operation, as well as machine diagnostics and repair.

To maintain competitiveness, customers will select the harvesting method that offers the lowest owning and operating cost. Today, customers often find it tedious to track all of the data needed to make this assessment. In the future, telematics will automate much, if not all, of this analysis.

John Deere

Marty Wilkinson

Marty Wilkinson is Vice President, Worldwide Forestry and Business Development, Worldwide Construction & Forestry Division, John Deere, a position he has held since December 2012.

Wilkinson joined Deere & Company in 1977 and has held positions of increasing responsibility in finance, information technology, strategic planning and operations in all of John Deere's equipment divisions.

With the forest industry now in recovery in North America, what do you see as the major issues facing loggers? What is John Deere doing to address these issues?

Economic conditions in North America, Europe and even China have remained volatile and uncertain for several years. As such, the effect on our customers is largely unchanged from previous years. The economy has created uncertainty and a lack of confidence among our customers, which is why John Deere is focusing on ways to help our customers weather the storm and continue to be profitable.

During difficult economic times, maintaining profitability is always the most critical. So we are always looking for ways to help our customers take cost out of their business, whether it's through keeping their equipment running longer, more efficiently, or increasing production.



Fuel costs also continue to be a key concern among our forestry customers. The cost of diesel fuel is rising, and that is having a major impact on operation costs and profitability. To mitigate the volatility of fuel prices, customers are asking for innovations that improve fuel efficiency, and John Deere is setting the standard for reduced fuel consumption and ultimately lowering operating costs for customers. For example, John Deere skidders give customers what they want and need by leveraging John Deere Power Systems technologies and the Power Tech Plus engines. A recent study shows that the John Deere 748H skidder could save customers between \$9,000 and \$12,900 annually in fuel costs depending on the price of diesel.

What do you feel distinguishes John Deere as a forestry equipment manufacturer? What does the company do to make sure it stays in touch with loggers and their needs?

What distinguishes John Deere is our enhanced focus on our customer. In fact, our Worldwide Construction & Forestry Division recently reorganized to enhance that focus even further. These strategic changes will help us better align our resources and global forestry product portfolio to meet our customers' current and future needs.

The reorganization will also help us better align with our distribution channel to ensure that John Deere and its dealers and retail operations continue to provide the partnership, service and support they need, when they need it.

When our customers talk, we listen. Because at the end of the day, it's all about providing them with reliable machines with up-to-date after-sales solutions to keep them up and running. Our goal is to offer products and solutions that are designed to give the best possible performance and productivity. We do so by creating intelligent solutions and services that are born of a genuine desire to know our customers' businesses and needs.

Given a five year time frame, what will be the biggest areas of focus for the company, in terms of forestry equipment innovation? Where will forestry equipment be in 10 years' time?

The immediate future will be both an exciting and challenging time for John Deere Forestry as key product lines receive updates to meet Final Tier Four emission requirements, along with many other enhancements to improve productivity and uptime, and lower operating costs. New technology is another area of focus as customers continue to be willing to invest in new technology, but only if it can improve their productivity, efficiency or profitability.

One example is our new option for forwarders—Intelligent Boom Control. This is a technological milestone and industry first, exclusively available from John Deere. This intuitive control system can significantly increase forwarder productivity while providing best possible fuel economy and boom lifetime.

A second example of this is John Deere's JDLink telematics system, which forestry customers are increasingly embracing to lower their operating costs. JDLink's capabilities vary widely by global region, but the system has shown its value by allowing customers to see how operators are using the equipment. Dealers can then in turn analyze the data to look for potential gains in productivity and fuel efficiency. This has allowed customers to better train their operators and to save thousands of dollars per month in fuel costs.

On a global basis, what harvesting methods and forestry equipment trends do you see now that could have an impact over the longer term?